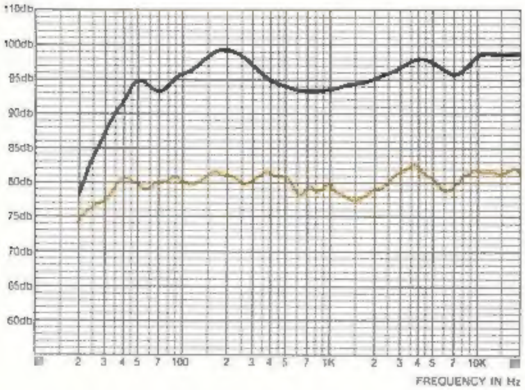
transtatic

ESS™

sound as clear as light

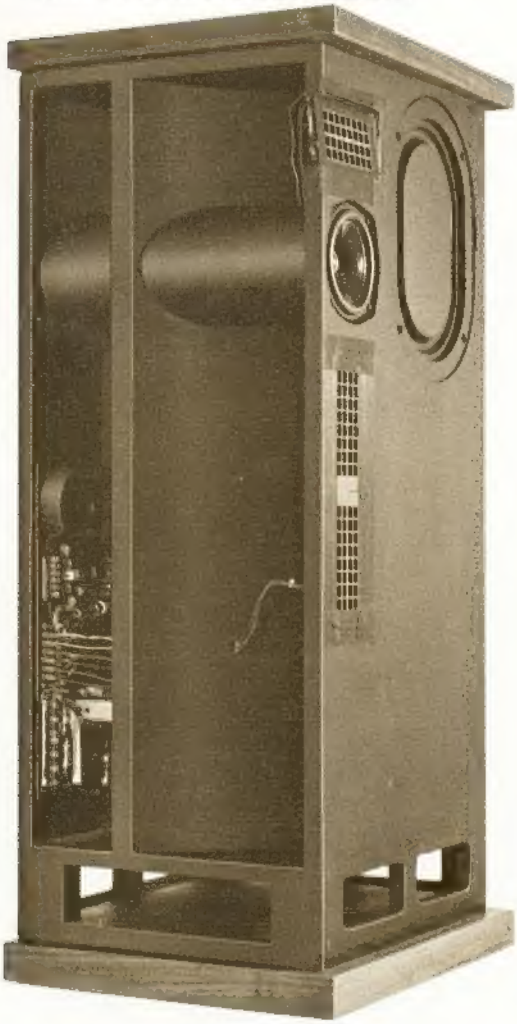
SOUND PRESSURE LEVEL
ATTAINABLE IN STEREO AT 1% DISTORTION

FREQUENCY RESPONSE CURVE
5 VOLTS RMS INPUT



Response characteristics taken in a controlled reverberant field environment. 20,000 cubic feet, .53 second delay time, corrected for field's resonant modes.

The ESS TRANSTATIC with grill removed showing its heavy construction. The midrange transmission line extends back and terminates at the rear of the cabinet. The woofer, a 9x12 inch flat piston foam unit is housed in a transmission line which terminates on the under side and radiates omnidirectionally through the slots. The angled vertical board gives a controlled dispersion to the rear wave of the tweeter array.



transtatic

The ESS TRANSTATIC is one of the world's finest loudspeaker systems, incorporating many unique and original engineering features. Uncompromised in any aspect of design, construction or performance, the ESS TRANSTATIC stands alone in its ability to recreate the grandeur of a full symphony orchestra, the delicacy of a human voice, or the incredible impact of electronically amplified rock.

The secret of this power and transparency—of sound as clear, shimmering and exciting as light—is acceleration. The TRANSTATIC drivers respond so immediately to the input signal that no time lag mars the crisp rap of a guitar attack, no overhang obscures the whispering glide of brushes, no phase anomalies turn multiple voices into a hum-like drone. Transients leap forth, complex instrumental interplay retains its detail and clarity, voices hold their soft uncolored breathy overtones to beyond audibility.

Indeed a state-of-the-art loudspeaker system, the ESS TRANSTATIC has an unmatched delicate sheen in its high frequencies, a smooth uncolored midrange, and a tight, dynamic bass powerful enough to propagate the energy of fundamental 20 Hz organ tones. In short, the TRANSTATIC is a speaker which sounds superb playing madrigals or Mantovani, chamber music or the Walter Carlos Moog.

ESS TRANSTATIC Specifications:

Description:
The ESS TRANSTATIC is a "hybrid" design utilizing two unique, dynamic drivers mounted in individual transmission lines, and an electrostatic tweeter array consisting of three panels carefully positioned for maximum linear dispersion. The rear waves of all these drivers are not constrained into fixed volume cavities with the resulting unavoidable resonant effects. Instead rear waves are utilized to add spaciousness to the stereo image and astounding depth to the bass propagation.

Frequency response:
Response range: below 15 Hz to above 32,000 Hz.
Response accuracy: ± 3db 25 Hz through 20,000 Hz as measured in a controlled field environment.

Distortion:
Less than 1% at 90db out at any frequency or combination of frequencies from 65 Hz through 20,000 Hz.

Power requirements:
60 watts RMS minimum, stable into reactive loads.

Power handling:
Greater than 650 watt musical peaks without distortion. The system is fused against excessive current input.

Input impedance:
4 ohms minimum.

Finish:
Hand rubbed oiled walnut or matched grain rosewood.

Dimensions:
42 inches high, 20 inches wide, 16 inches deep.

Warranty:
Five years parts and labor.

Price: DM 3 990.–

[redacted]

Sold only in matched stereo pairs.

Design refinements may alter specifications without notice or obligation.

ESS

ELECTROSTATIC SOUND SYSTEMS, INC.

9613 oates drive
sacramento, california 95827

High Fidelity Lab Reports On 6 New Speakers

New Hybrid Is High Performer

The Equipment: Trans-Static I, a full-range speaker system in enclosure. Dimensions: 42 by 18 by 15 inches. Manufacturer: Electrostatic Sound Systems, Inc.,

Comment: This high-performing speaker system from a new California firm blends electrostatic and dynamic reproducer elements to form a top-quality unit of interest to stereo perfectionists. A floor-standing model, it is a three-way system containing three push/pull electrostatic cells for the highs (above 1,350 Hz), a plastic-diaphragm 5-inch cone speaker for the midrange (300 to 1,350 Hz), and a 12 inch by 8 inch oval-shaped high-compliance woofer for the bass. The woofer uses a flat, aluminum-stressed, plastic diaphragm driven by a very heavy magnet and loaded with a transmission-line enclosure that permits, during manufacture, individual tuning of the cabinet-speaker system for optimum bass response. The cones and electrostatics are mounted on a front baffle board hidden behind a wrap-around grille. When sold in pairs, each TS-I is a mirror image of the other so that the two systems may be positioned for optimum stereo spread in a given room with the treble dispersion normally toward the center. In addition to "front-firing," the electrostatics radiate their rear sound energy against an angled board behind the grille, so that a modified doublet effect is created that minimizes any beaming tendency and helps to achieve a broad-angle, natural dispersion of sound. The midrange speaker has its own transmission line terminating in a round opening at the rear of the enclosure. The enclosure itself has a raised underside on which the woofer's transmission line terminates, so that the bass actually is loaded to the room via slots around the bottom in addition to the direct radiation off the diaphragm above.

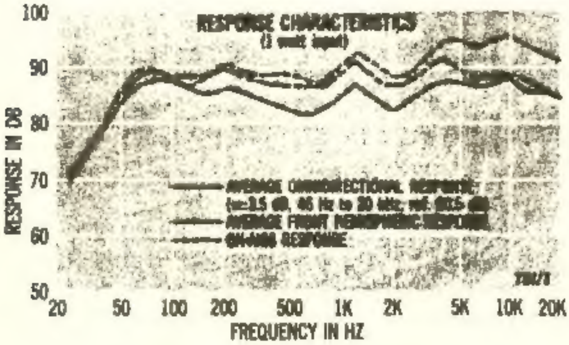
The system uses a complex crossover network composed of precision circuit parts and fitted with two level controls (for midrange and highs). It may be modified, on order, to suit the system for biamplifier use. The TS-I is protected by two fuses; rear input terminals are color-coded binding posts. Also at the rear is the power cord that must be plugged into an AC outlet to energize the electrostatics. Workmanship and construction are first-rate throughout.

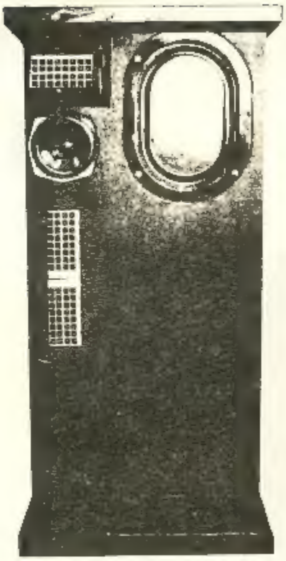
Laboratory and listening tests show the Trans-Static I to be a superb performer that takes a ranking place among the top speaker systems available today. Response, clocked at CBS Labs, ran within plus or minus 3.5 dB from 46 Hz to 20,000 Hz, outstandingly wide and linear for a speaker. In audible test-tone tests, the low end rolled off smoothly with fundamental bass still evident down to 20 Hz. Doubling in this area was distinctly lower than average. Throughout the entire range of the speaker, response seemed exemplary—well balanced, clear, and with excellent dispersion of treble. Tones as high as 12,000 Hz were clearly audible well off axis; at 14,000 Hz the response was fainter and more directive but still audible off axis; at 17,000 Hz the signal was audible only on axis.

Definitely in the low-efficiency class, the Trans-Static I needed at least 20 watts to produce the standard test output level of 94 dB at 1 meter on axis. Indeed, the manufacturer recommends using it with the highest-powered amplifiers available (and certainly nothing less than 30 watts per channel) if you are to realize optimum performance. The system could not be driven into significant distortion with steady-state power input of 100 watts, and it could handle peaks of up to 654.5 watts—which attests to its ruggedness of construction and, with an output at that wattage level of 110.7 dB, its excellent dynamic range too. Lab measurements show the Trans-Static I to be essentially a 4-ohm system, and so the usual cautions about running two of them (or one of them with any other system) from the same output taps of a solid-state amplifier apply.

All the theory and verbal explanation in the world cannot adequately describe the sound of a great loudspeaker driven by an ample amplifier fed with high-grade program material. The experience is exhilarating, and it rather defines "high fidelity" at any given state of the art. The Trans-Static I is such a loudspeaker. Its upper range has all the advantages of clarity and definition of electrostatics, with none of the "overetched" quality of some; the midrange is smooth and very amply dispersed; the low end is solid and clean. The total effect is one of effortless and accurate reproduction of the kind that almost lets you "see" the glint of the brass or the drawing of bows across strings. In common with a few other very fine reproducers we have had the pleasure of testing, we would say that the Trans-Static I could serve as a professional monitor as well as the mouthpiece of the finest of home music systems.

CIRCLE 139 ON READER-SERVICE CARD





With grille cloth removed, Trans-Static I looks like this from the front. Note unusual flat, oval woofer.

Trans-Static I Speaker Harmonic Distortion*

Output Level	Frequency			
	80 Hz		300 Hz	
(dB)	% 2nd	% 3rd	% 2nd	% 3rd
70	.12	.21	.10	.20
75	.15	.30	.09	.20
80	.28	.38	.12	.25
85	.50	.45	.11	.27
90	1.0	.60	.20	.35
95	1.9	1.1	.33	.40
100	5.0	1.5	.65	.40
102.5			1.0	.25

*Distortion data are taken on all tested speakers until distortion exceeds the 10 per cent level or the speaker produces the spurious output known as buzzing, whichever occurs first.

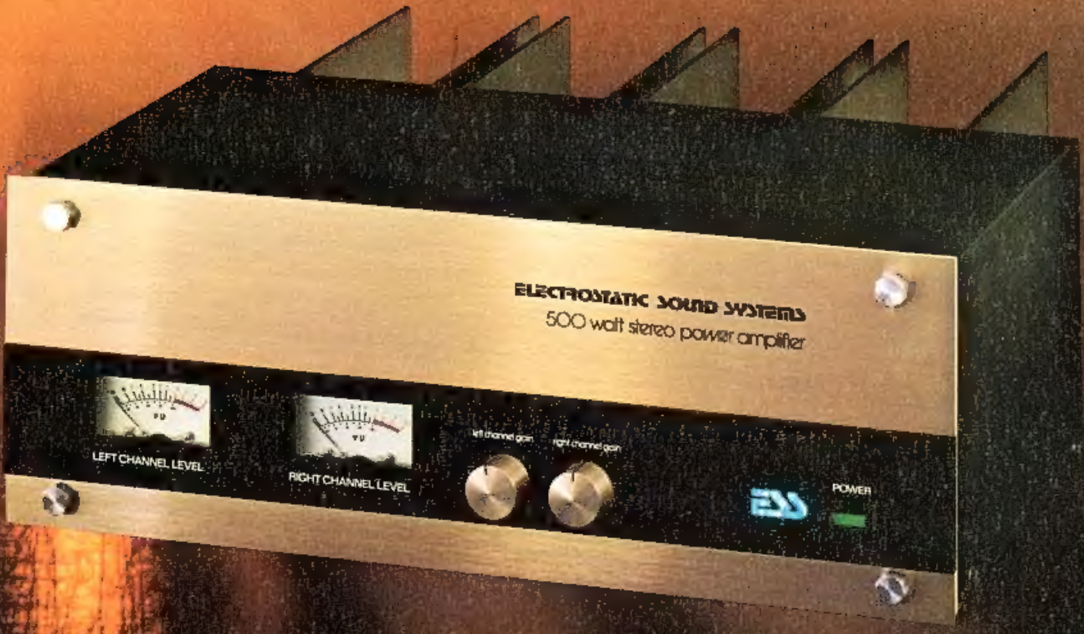
HIGH FIDELITY MAGAZINE JUNE 1972

In Deutschland erhältlich durch:

TRANSAUDIO

7 Stuttgart, Postfach 891

500 power amplifier



ESS™

sound as clear as light

500 power amplifier

ESS, producer of loudspeaker systems which have gained acknowledgement as among the world's finest, has now designed the most advanced ultra high power amplifier available today. An amplifier whose outstanding performance is realized not only under static test conditions, but in actual use under widely varying dynamic and reactive loudspeaker loads.

Driven by an active current source circuit for complete freedom from line voltage fluctuation effects, the ESS power amplifier additionally has the tremendous reserve energy and absolute stability necessary to drive inefficient air suspension or difficult capacitive transducers at the most demanding power levels. This incredible reserve and unmatched stability mean the last vestige of "listener fatigue" is completely removed for the clearest, purest sound even under high stress conditions.

This superb instrument is designed to tolerate even the most abusive demands. When the ESS amplifier is driven into overload it reacts without breakup, clips cleanly and exhibits no trace of irritating waveform excitations or spurious oscillations that are heard as "edginess" in other areas of the frequency spectrum.

Here at last is a super power amplifier whose performance and delicacy of sound have not been compromised to brute power requirements. Clean, transparent, stable, as superb in its styling as it is exciting in its performance, the ESS amplifier is the electronic energy source for sound as clear as light.

ESS 500 power amplifier specifications:

Power rating:
250 watts RMS per channel from 20 Hz through 20,000 Hz both channels driven into 8 ohms. Typically greater than 300 watts per channel into 8 ohms.

Frequency response:
± .05db 20 Hz through 20,000 Hz at one watt.
± .5db 5 Hz through 100,000 Hz at one watt.
± 1db 3 Hz through 150,000 Hz at one watt.

Power bandwidth:
1 Hz through 100,000 (rated power ± 3db).

Harmonic and intermodulation distortion:
Under .1% 20 Hz through 20,000 Hz at any power level up to rated output.
Typically .05% or less at normal operating levels.

Hum and noise: 100db below rated output

Damping factor: 1,000 to 1 at 20 Hz

Square wave rise time: less than 1.7 microseconds.

Phase shift:
10 degrees leading at 20 Hz.
10 degrees lagging at 20,000 Hz.

Sensitivity: 1.75 volts input for rated output.

Input impedance:
Model 500: 47,000 ohms
Model M500: 16,000 ohms.

Special features:
Illuminated level meters and gain controls for each channel. (Model M500 only.)
Fully suppressed turn on/turn off transient surges.
Active current source circuitry for greater power bandwidth and freedom from line voltage fluctuations.
Unconditional stability and freedom from spurious oscillations.
Fully short protected.

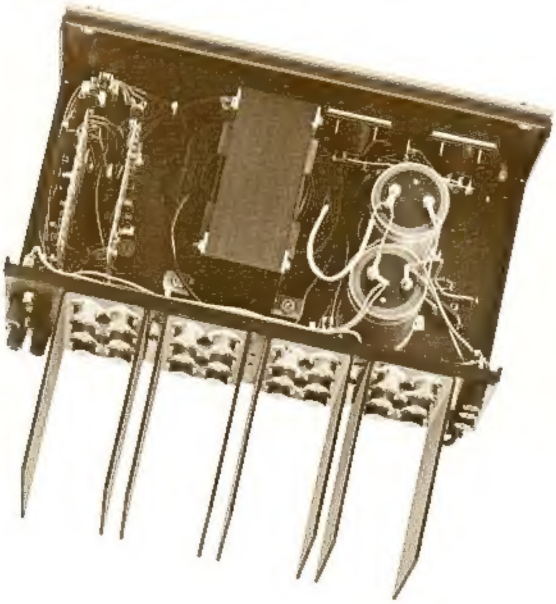
Finish:
Brushed rose gold face plate and machined aluminum knobs, with red ebony plexiglass control bar, black anodized case.

Dimensions:
16⅝ inches wide, 6 inches high, 15 inches deep.

Warranty: Three years parts and labor.

Design refinements may alter specifications without notice or obligation.

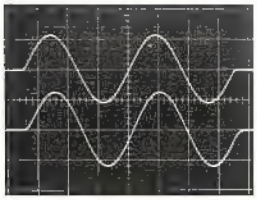
With its cover removed the ESS POWER AMPLIFIER shows its rugged ⅛ inch thick chassis and huge power supply components.



The dual trace oscilloscope dramatically displays outstanding performance capabilities of the ESS 500 POWER AMPLIFIER.

1. 20,000 Hz SINE WAVE TONE BURST.
   Upper Trace: Oscillator.
   Lower Trace: ESS AMPLIFIER, 10 volts per division.
2. 10,000 Hz SQUARE WAVE.
   Upper Trace: Oscillator.
   Lower Trace: ESS AMPLIFIER, 10 volts per division.
3. 100 Hz SQUARE WAVE.
   Upper Trace: Oscillator.
   Lower Trace: ESS AMPLIFIER, 10 volts per division.
4. 5,000 Hz SINE WAVE.
   Upper Trace: Oscillator.
   Lower Trace: ESS AMPLIFIER clipping at 350 watts, single channel driven.

1.



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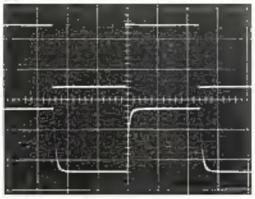

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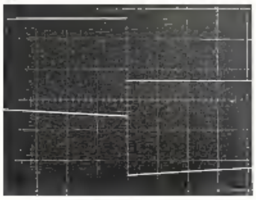

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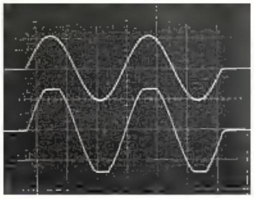
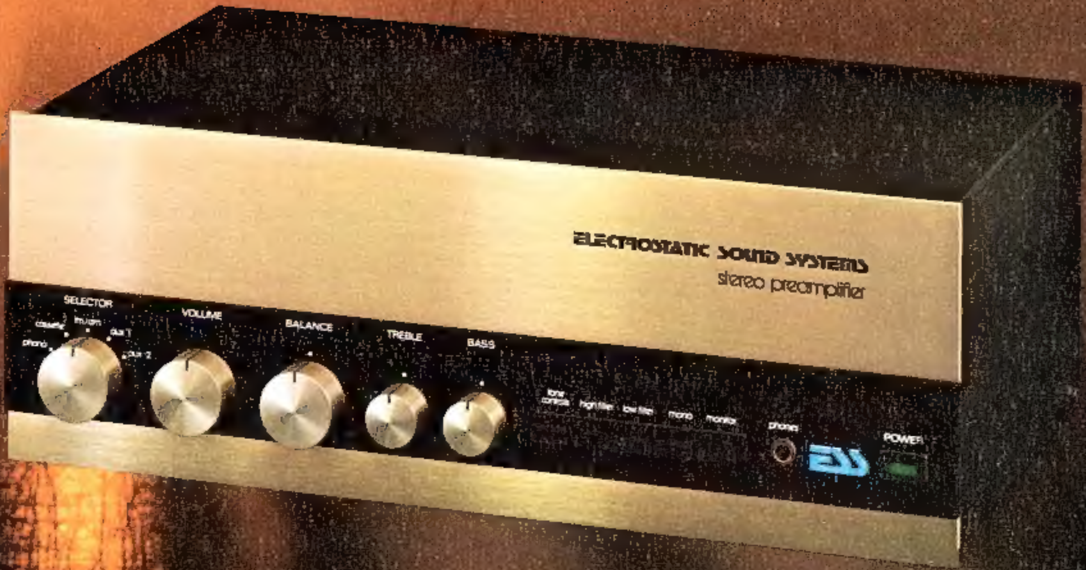


ESS. inc. 9613 oates drive • sacramento, california 95827

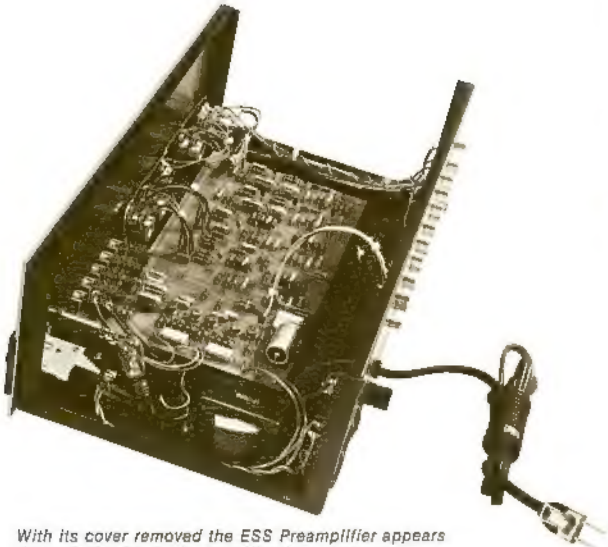
stereo preamplifier



ESS™

sound as clear as light

stereo preamplifier



With its cover removed the ESS Preamplifier appears deceptively simple. Its specifications, however, underscore the unparalleled refinement of its critical circuitry.

The ESS STEREO PREAMPLIFIER is a perfectionist unit which employs specially developed circuitry to set exciting new performance standards for state-of-the-art audio gear.

Specifications of this remarkable instrument are dramatic and revealing. Harmonic and intermodulation distortion have been reduced to breathtaking levels, frequency bandwidth is ultra wide, and response irregularities are measured in hundredths of a db. Transients leap forth from pure silence, bass is sharp and definite while shimmering highs breathe easily.

As elegant in its restrained clean styling as it is impressive in its crystalline clarity, the ESS STEREO PREAMPLIFIER is a visual and electronic realization of sound as clear and exciting as light.

ESS Stereo Preamplifier Specifications:

Bandwidth and frequency response:
High level section:
± .025db 10 Hz through 40,000 Hz.
± .1db 5 Hz through 75,000 Hz.
± 1db 2 Hz through 2,000,000 Hz.
Tone control section:
± .025db 10 Hz through 25,000 Hz.
± .1db 5 Hz through 40,000 Hz.
± 1db 2 Hz through 150,000 Hz.
Phono preamp section:
± .25db from RIAA curve 20 Hz through 20,000 Hz.

Distortion:
Total harmonic distortion: .0075% 20 Hz through 20,000 Hz at any level up to rated output.
Intermodulation distortion: .005% 60 Hz and 4,000 Hz mixed at a 4 to 1 ratio at any level up to rated output.

Noise:
High level section: —100db at rated output.
Tone control section: —96db at rated output.
Phono preamp section: —80db referenced to 10mv 1kHz input signal.

Square wave rise time: 50 nanoseconds.

High level input impedance: 75,000 ohms.

Phono input impedance/capacitance:
47,000 ohms impedance. 50pf or less capacitance.

Output load impedance: 10,000 ohms or greater.

Rated output: 2.5 volts RMS.

Special features:
Fully suppressed turn on/turn off transient pulses.
Tone control defeat switch removes controls from circuit for truly flat response.
Two tape record facilities.
Two sets of power amplifier outputs.
Low impedance headphone jack on front panel.
Super heavy duty switch permitting remote turn on of modern ultra high power amplifiers through the preamplifier switched outlet.
True zero separation mono switch for single line sources and special hook ups.

Finish:
Brushed rose gold face plate and knobs, red ebony plexiglass control bar, black anodized case.

Dimensions:
16⅝ inches wide, 6 inches high, 9 inches deep.

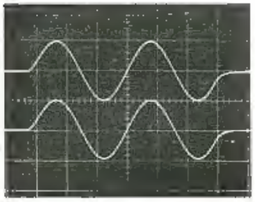
Warranty: Three years parts and labor.

Design refinements may alter specifications without notice or obligation.

The dual trace oscilloscope dramatically displays outstanding performance capabilities of the ESS STEREO PREAMPLIFIER.

1. 20,000 Hz SINE WAVE TONE BURST.
   Upper Trace: Oscillator.
   Lower Trace: ESS PREAMPLIFIER, 2 volts per division.
2. 1,000 Hz SQUARE WAVE.
   Upper Trace: Oscillator.
   Lower Trace: ESS PREAMPLIFIER with tone controls engaged, 1 volt per division.
3. 50,000 Hz SQUARE WAVE.
   Upper Trace: Oscillator.
   Lower Trace: ESS PREAMPLIFIER, 1 volt per division.
4. 20 Hz SQUARE WAVE.
   Upper Trace: Oscillator.
   Lower Trace: ESS PREAMPLIFIER, 1 volt per division.

1.



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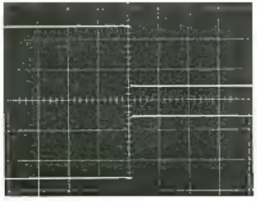

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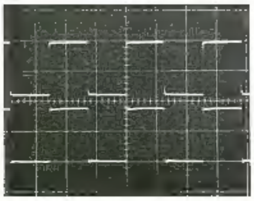

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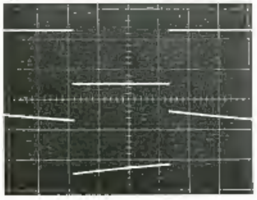

ESS, inc. 9613 oates drive • sacramento, california 95827

ESS

ELECTROSTATIC SOUND SYSTEMS, inc.

»A piece of wire with gain«

Die nachstehenden Oszillographen-Fotos demonstrieren eindrucksvoll die Leistungsfähigkeit des ESS 1. In den Abbildungen stammt jeweils die obere Welle vom Oszillator, die untere vom Vorverstärker

1. 20000 Hz Sinus, 2 V/Unterteilung
2. 1000 Hz Rechteck, 1 V/Unt., Klangregelnetzwerk eingeschaltet
3. 50000 Hz Rechteck, 1 V/Unt.
4. 20 Hz Rechteck, 1 V/Unt.

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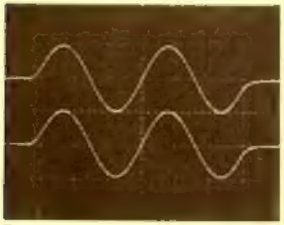

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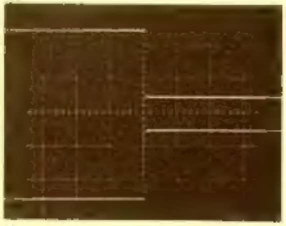

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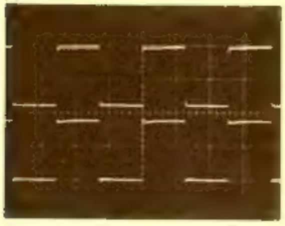

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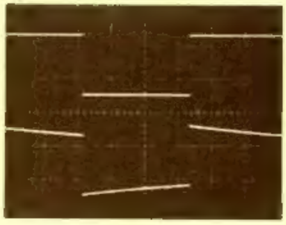

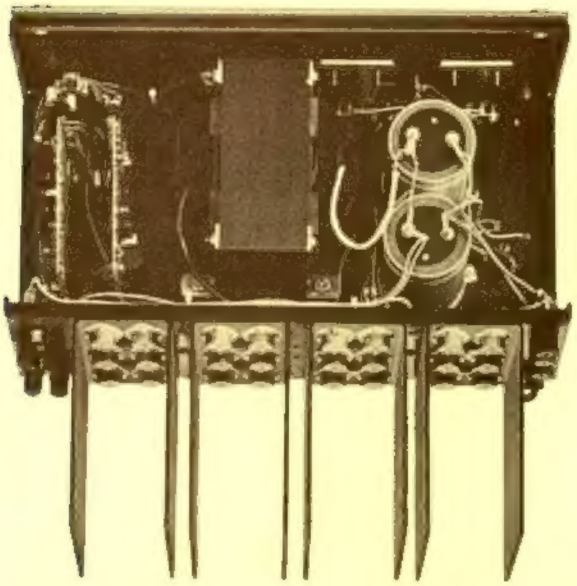

Bei geöffneter Haube fallen am ESS 500 besonders die riesigen Stromversorgungs-Komponenten auf.

Die nachstehenden Oszillographen-Fotos demonstrieren eindrucksvoll die Leistungsfähigkeit des ESS 500. In den Abbildungen stammt jeweils die obere Welle vom Oszillator, die untere vom ESS 500.

1. 20000 Hz Sinus, 10 V/Unt.
2. 10000 Hz Rechteck, 10 V/Unt.
3. 100 Hz Rechteck, 10 V/Teilstrich
4. 5000 Hz Sinus, der ESS 500 beginnt bei 350 Watt (Sinus, 8Ω 1 Kanal) gerade zu übersteuern

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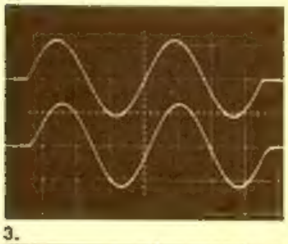

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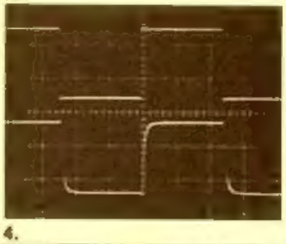

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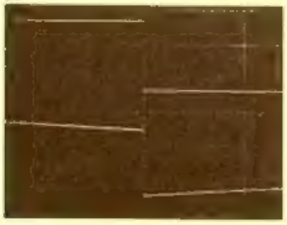

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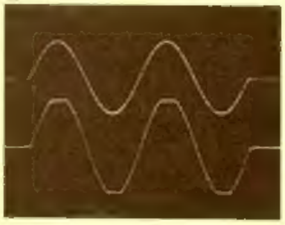

SPEZIFIKATIONEN:

Änderungen, die dem technischen Fortschritt dienen, vorbehalten.

Zur Ermittlung der Daten und deren Einhaltung in der Serienproduktion wurden u.a. folgende Geräte verwendet:

Krohn - Hite 5400 A	Funktion Generator
Tektronix 453 A	Oszilloskop
Crown IMA	Intermodulationsverzerrungs-Analysator
Hewlett-Packard 400 F	Voltmeter
ESS H. D. A.	Klirrfaktor Messbrücke (ESS mußte hierfür ein eigenes Gerät entwickeln, da kein anderes mit nur 0,001 % Eigenklirrfaktor zur Verfügung stand.)

ESS 1 Vorverstärker:

Frequenzgang:

Hochpegelige Eingänge:	10–40000	Hz	± 0,025	dB
	5–75000	Hz	± 0,1	dB
	2–2000000	Hz	± 1	dB
Klangregelnetzwerk:	10–25000	Hz	± 0,025	dB
	2–150000	Hz	± 1	dB
Phono-Vorverstärker:	20–20000	Hz	± 0,25	dB

max. Abweichung von der RIAA Kurve

Nichtlineare Verzerrungen;
Klirr (Gesamtheit aller Oberwellen) und Intermodulation, für alle Frequenzen von 20–20000 Hz und alle Ausgangsspannungen bis 2,5 Volt: weniger als 0,01 % (typisch: 0,005 %)

Fremdspannungsabstand:

Hochpegelige Eingänge:	100 dB unter 2,5 Volt (oder besser)
Klangregelnetzwerk:	96 dB
Phono-Vorverstärker:	80 dB bez. auf 10 mV

Rechteckanstiegzeit: 50 Nano Sekunden

Phasendrehungen: weniger als 1° bei 20 KHz

Eingangsimpedanzen:

Hochpegelige Eingänge:	75000 Ohm
Phono:	47000 Ohm, 50 pF Kapazität

Ausgangsimpedanz: 10000 Ohm

Nennausgangsspannung: 2,5 Volt

Abmessungen und Gewicht:
42 cm b, 15,3 cm h, 23 cm t; ca. 11/7 Kg

ESS 500 / M 500 Leistungsverstärker

Leistung:
250 Watt Sinus pro Kanal in 4 oder 8 Ohm Last, bei gleichzeitigem Betrieb beider Kanäle von 20 bis 20000 Hertz,
150 Watt an 16 Ohm
typisch: 300 Watt an 8, 400 Watt an 4, 175 Watt an 16 Ohm

Nichtlineare Verzerrungen;
Klirr und Intermodulation von 20–20000 Hz:
0,1 %; normalerweise 0,025 % und weniger

Frequenzgang, bei 1 Watt:

20–20000	Hz	± 0,05	dB
5–100000	Hz	± 0,5	dB
1–200000	Hz	– 3	dB

Leistungsbandbreite: 1–100000 Hz (– 3 dB)

Dämpfungsfaktor: 1000 bei 20 Hz / 8 Ohm

Rechteckimpulsanstiegzeit: unter 1,7 Micro Sekunden

Phasendrehungen: 10° Voreilung bei 20 Hz, 10° Verzögerung bei 20 KHz

Fremdspannungsabstand: 100 dB oder besser unter 250 Watt

Empfindlichkeit: 1,75 Volt für 250 Watt / 8 Ohm

Eingangsimpedanz: Modell 500: 47000 Ohm, Modell M 500: 16000 Ohm

Abmessungen und Gewicht: 42 cm b, 15,3 cm h, 38,5 cm t; ca. 18,5/14,5 Kg

Modell M 500 mit VU Metern und Pegelreglern.

HiFi Elektronik an den Grenzen heute möglicher Perfektion, soweit sich das in trockenen Zahlen ausdrücken läßt. Vielleicht lassen sie in Ihnen eine leise Ahnung aufsteigen, was diese Geräte wirklich können – in Verbindung mit den Lautsprechern von ESS, die in unglaublich kurzer Zeit erstaunliche Anerkennung fanden – und mit erstklassigem Programmaterial – ?

».... A piece of wire with gain« – »Ein Stück Draht mit Gewinn, mit Verstärkung« – Das ist ein in Amerika üblicher Ausdruck zur Beschreibung eines perfekten Verstärkers. Der hinter dieser Formulierung stehende Gedanke ist folgender: Die Aufgabe eines Verstärkers ist es, allein das eingespeiste Signal zu verstärken, ohne dieses dabei irgendwie zu beeinträchtigen. Das Innenleben eines Verstärkers besteht nun aber aus Halbleitern, die, von sich aus keineswegs linear, den allergrößten Hang haben, das sie durchlaufende Signal auf's gröbste zu verfälschen – es bedarf eines nicht zu unterschätzenden Aufwandes an Ingenieurskunst, ihnen das abzugewöhnen. So wäre es ideal, Bauteile zu haben, die sich in dieser Beziehung wie das erwähnte Stück Draht verhielten, indem sie allein verstärken, aber dabei wie unser Draht dem Signal nicht die geringste Verfälschung überlagern würden. A piece of wire with gain – der perfekte Verstärker!

Wir wagen nicht die Behauptung, dieses Ideal erreicht zu haben. Aber wir sind zuversichtlich, ihm näher zu sein, als irgendwer sonst.

Der Vorverstärker ESS 1 und die Endstufen ESS 500 und M 500.

Ihre Eigenschaften im einzelnen:

Ungewöhnliche neue Schaltungsanordnungen ermöglichten

☐ Verzerrungen jeder Art auf ein bisher unerreichbares Maß zu reduzieren.

☐ Den Frequenzgang weiter über die Hörgrenzen zu verschieben, als je zuvor (Natürlich können Sie 200000 Hz, vielleicht sogar 20000 Hz nicht mehr hören – aber die extreme Bandbreite bringt einen ultra–linearen Frequenzgang im Hörbereich, extreme Impulstreue und fast völlige Freiheit von Phasendrehungen – und das alles zusammen können Sie sehr wohl hören).

ESS 1 Vorverstärker:

☐ Keinerlei Ein- und Ausschaltgeräusche

☐ Dimensionierung des Netzteils erlaubt Netzanschluß einer Super–Hochleistungsendstufe an den Vorverstärker

☐ 2 Endverstärker Ausgänge erlauben u. a. »equalized« Tonbandaufnahmen

☐ Anschlußmöglichkeit auch für nieder–ohmigen Kopfhörer

☐ Besondere klangliche Vorzüge liegen u. a. in der ungewöhnlich hohen Qualität von Phono–Vorverstärker und Klangregelnetzwerk

ESS 500/M 500 Leistungsverstärker:

Durch eine völlig neue Schaltungstechnik (z. B. durchgehende Active Current Source Circuitry in Verbindung mit Darlington Type Direct Coupling, AB_2 – Arbeitsweise) ergibt sich eine Reihe überzeugender Vorteile, wie sie in diesem Ausmaß insgesamt – und schon garnicht zusammen mit so enorm hoher Leistung (1,6 KWatt Netztrafo mit einer Speicherkapazität von mehr als 100 Joule!) – noch nicht geboten wurden:

☐ Extreme interne Stabilität: Stromversorgung und Arbeitspunkte der einzelnen Verstärkerstufen sind so ausgelegt, daß diese selbst bei größeren Netzspannungsschwankungen und den allerstärksten Impulsen, die selbst den ESS 500 überlasten – auch dabei bleibt die Symmetrie erhalten, die Erholung erfolgt augenblicklich – stabil bleiben. Das bedeutet Freiheit von Impulsverzerrungen, die bei vielen, sonst u.U. recht guten Verstärkern den Hörgenuß oft empfindlich trüben. Eine angenehme Nebenerscheinung der hier umrissenen Zusammenhänge ist das Fortfallen von Ein- und Ausschaltgeräuschen.

☐ »unbedingte« externe Stabilität. Lautsprecher, insbesondere elektrostatische, stellen eine komplexe Last dar, die auf den Verstärker zurück wirkt (Kapazitäten, Induktivitäten, Impedanzunterschiede) und dessen Verhalten (im Gegensatz zu den bei Tests üblicherweise verwendeten rein Ohm'schen Widerständen), sollte er nicht wirklich stabil sein, übel beeinflußen können.

☐ Verschwindend geringe Übernahme-Verzerrungen (crossover distortion). Diese sind eine Folge mangelhafter Symmetrie in der Arbeitsweise der Endstufe und können – speziell bei leisen Lautstärken – sehr störend sein.

Die hier geschilderten Vorzüge können Sie direkt nicht aus Datenblättern oder Meßprotokollen entnehmen. Aber gerade sie sind es, die das Herausragende vom nur guten scheidet. In Verbindung mit den – nebenstehenden – Daten ermöglichen sie makellose Musikwiedergabe; innerhalb der Gesamtanlage werden ESS Verstärker niemals in irgendeiner Weise die Qualität der Darbietung beeinträchtigen – »a piece of wire with gain«.

TRANSAUDIO

PREISLISTE

für

ESS

Electrostatic Sound Systems, Inc. (USA)

TEMPEST	~~DM 995,-~~	895,-
Modell IX	~~DM 1 295,-~~	1 160,-
Modell VII	~~DM 1 595,-~~	1 380,-
TRANSLINEAR II	~~DM 1 995,-~~	1 780,-
TRANSTATIC I	~~DM 3 990,-~~	3 600,-
ESS 1 Vorverstärker	~~DM 2 190,-~~	1 880,-
ESS 500 Endverstärker	~~DM 3 490,-~~	2 980,-
ESS M 500 Endverstärker mit VU Metern und Pegelreglern	~~DM 3 990,-~~	3 480,-

Etwa ab Februar 1973 lieferbar:

SATELLIT 4 4 Kanal Lautsprechersystem best. aus: Baß-"Würfel" mit 100 Watt Sinus Verst. u. Matrix mit 4 Mittelhochton Lautspr.	ca. ~~DM 3 600,-~~	3 280,-
Spez. Transmission Line Baß Lautspr.	ca. ~~DM 1 300,-~~	

Obige Preise gelten für Lautsprecher in Nußbaumausführung; Sonderausführungen auf Anfrage.

In allen Preisen sind 11% MWST. enthalten. Stand Dezember 1972